

CLAIMS

What is claimed is:

- 1 1. A handheld computer comprising:
 - 2 a first segment;
 - 3 a second segment moveably coupled to the first segment to move between a contracted
 - 4 position and an extended position;
 - 5 a display assembly provided by the first segment;
 - 6 a first input mechanism provided by the second segment;
 - 7 wherein the first input mechanism overlays a portion of the display assembly when the
 - 8 second segment is in the contracted position, and wherein the first input mechanism is
 - 9 positioned away from the display assembly so that the portion of the display assembly
 - 10 is accessible to contact by a user when the second segment is in the extended position.
- 1 2. The handheld computer of claim 1, wherein the display assembly
 - 2 includes a first section having a cross-section comprising a digitizer pad and a
 - 3 screen, and a second section comprising the digitizer pad without the screen,
 - 4 and wherein the portion of the display assembly that is overlaid by the first
 - 5 input mechanism includes the second section.
- 1 3. The handheld computer of claim 1, wherein the display assembly
 - 2 includes an immediate character recognition section configured to immediately
 - 3 recognize and display assembly a character entry, and wherein the portion of the
 - 4 display assembly that is overlaid by the first input mechanism includes the
 - 5 immediate character recognition section.

1 4. The handheld computer of claim 1, wherein an exterior surface of the
2 second segment includes a front panel, a plurality of input mechanisms
3 including the first input mechanism being actuatable by the front panel, and
4 wherein the front panel overlays the portion of the display assembly when the
5 second segment is in the contracted position.

1 5. The handheld computer of claim 1, wherein the first input mechanism
2 includes a multi-directional member.

1 6. The handheld computer of claim 1, further comprising a plurality of
2 input mechanisms including the first input mechanism, and wherein at least one
3 of the plurality of input mechanisms is a button that can be pressed to cause an
4 input to be entered onto the handheld computer.

1 7. The handheld computer of claim 1, further comprising a plurality of
2 input mechanisms including the first input mechanism, and wherein at least one
3 of the plurality of input mechanisms is actuatable by detecting surface contact.

1 8. The handheld computer of claim 1, wherein the first segment includes a
2 first rail, the first rail being positioned on a lateral side of the first segment, and
3 wherein the second segment includes a first connecting member that is engaged
4 to the first rail, the first connecting member slideable along a length of the first
5 rail to enable the second segment to move between the contracted position and
6 the extended position.

1 9. The handheld computer of claim 1, wherein the first segment includes a
2 first rail and a second rail, and wherein the second segment includes a first
3 connecting member and a second connecting member, the first connecting
4 member being engaged to the first rail, the second connecting member being
5 engaged to the second rail, the first connecting member and the second
6 connecting member each being slideable along a length of the respective first
7 rail and second rail to enable the second segment to move between the
8 contracted position and the extended position.

1 10. The handheld computer of claim 9, wherein the first segment comprises
2 a front shell, a midframe, and a bottom shell, and wherein the first rail is formed
3 onto a first surface of the midframe, and wherein the second rail is formed onto
4 a second surface of the midframe.

1 11. The handheld computer of claim 9, wherein the first rail and the second
2 rail extend lengthwise on a back surface of the first segment.

1 12. The handheld computer of claim 11, wherein the second segment
2 includes a back plate that slides adjacent to the back surface of the handheld
3 computer.

1 13. The handheld computer of claim 11, wherein the back plate of the
2 second segment includes the first connecting member that slides within the first
3 rail, and the second connecting member that slides within the second rail.

1 14. The handheld computer of claim 1, wherein the first segment is slideably
2 coupled to the second segment so that the second segment moves in a single
3 direction when moving between the contracted position and the extended
4 position.

1 15. The handheld computer of claim 1, further comprising a midframe
2 coupled to the first segment and the second segment.

1 16. The handheld computer of claim 15, wherein the second segment
2 connects to the midframe to move between the contracted position and the
3 extended position.

1 17. The handheld computer of claim 16, wherein the midframe includes a
2 first rail, and wherein the second segment includes a first connecting member
3 that is engaged to the first rail, the first connecting member moving a distance
4 in the first rail to enable the second segment to move between the contracted
5 position and the extended position.

1 18. The handheld computer of claim 16, wherein the midframe includes a
2 first rail and a second rail, and wherein the second segment includes a first
3 connecting member and a second connecting member, the first connecting
4 member being engaged to the first rail, the second connecting member being
5 engaged to the second rail, the first connecting member and the second
6 connecting member each moving a distance in the respective first rail and

7 second rail to enable the second segment to move between the contracted
8 position and the extended position.

1 19. A handheld computer comprising:
2 a first segment;
3 a contact-sensitive display assembly accessible on a front surface of the first
4 segment; and
5 a second segment slideably coupled to the first segment to move between a
6 contracted position and an extended position, the second segment being
7 positioned to overlay and reduce an area of the contact-sensitive display
8 assembly that is accessible to contact when moved from the extended
9 position to the contracted position.

1 20. The handheld computer of claim 19, wherein the display assembly is
2 contact-sensitive.

1 21. The handheld computer of claim 20, wherein all of the display assembly
2 is accessible to receive contact as input when the second segment is in the
3 extended position.

1 22. The handheld computer of claim 20, wherein the display assembly
2 includes an immediate character recognition section configured to immediately
3 recognize and display a character entry, and wherein a portion of the display
4 assembly that is overlaid by the first segment includes the immediate character
5 recognition section.

1 23. The handheld computer of claim 20, wherein the display assembly
2 includes a first section having a cross-section comprising a digitizer pad and a
3 screen, and a second section comprising the digitizer pad without the screen,
4 and wherein a portion of the display assembly that is overlaid by the first
5 housing segment includes the second section.

1 24. The handheld computer of claim 19, further comprising a midframe
2 coupled to the first segment and the second segment.

1 25. The handheld computer of claim 24, wherein the midframe includes a
2 first rail, and wherein the second segment includes a first connecting member
3 that is engaged to the first rail, the first connecting member moving a distance
4 in the first rail to enable the second segment to move between the contracted
5 position and the extended position.

1 26. The handheld computer of claim 24, wherein the midframe includes a
2 first rail and a second rail, and wherein the second segment includes a first
3 connecting member and a second connecting member, the first connecting
4 member being engaged to the first rail, the second connecting member being
5 engaged to the second rail, the first connecting member and the second
6 connecting member each moving a distance in the respective first rail and
7 second rail to enable the second segment to move between the contracted
8 position and the extended position.

1 27. A housing assembly for a handheld computer, the housing comprising:
2 a first housing segment having a front surface, the front surface including an opening to
3 provide access to a display surface for the handheld computer;
4 a second housing segment moveably coupled to the first housing segment to move between a
5 contracted position and an extended position, the second housing segment overlaying
6 a first region of the opening of the first housing segment when in the contracted
7 position, the first region of the opening that is overlaid by the second housing
8 segment being reduced as the second housing segment is moved from the contracted
9 position towards the extended position.

1 28. The housing assembly of claim 27, wherein none of the first area is overlaid by the
2 second housing segment when the second housing segment is in the extended position.

1 29. The housing assembly of claim 27, wherein,
2 the first housing segment provides a top housing for the handheld computer, the top housing
3 having a reduced section provided towards a bottom of the top housing,
4 the second housing segment provides a bottom housing for the handheld computer,
5 the bottom housing being configured to overlay at least a majority of the reduced section of
6 the top housing when in the contracted position, and
7 the bottom housing being configured to at least not overlay the majority of the reduced
8 section when in the extended position.

1 30. The housing assembly of claim 29, wherein the second housing segment includes a
2 back plate that extends from the bottom housing to slide along a back surface of the first
3 housing segment when the second housing segment is moved between the contracted position
4 and the extended position.

1 31. The housing assembly of claim 27, wherein the first housing segment comprises a top
2 shell, a midframe, and a bottom shell.

1 32. The housing assembly of claim 31, wherein the midframe has a first rail on a first
2 lateral side of the midframe, and a second rail on a second lateral side of the midframe.

1 33. The housing assembly of claim 31, wherein the second housing segment includes a
2 bottom housing and a back plate, the bottom housing being shaped to abut a top housing of
3 the first housing segment when the second housing segment is moved into the contracted
4 position, the back plate being positioned to slide along a back surface of the first housing
5 segment when the second housing segment is moved between the contracted position and the
6 extended position.

1 34. The housing assembly of claim 33, wherein an interior surface of the housing
2 includes a first connecting member and a second connecting member, the first connecting
3 member and the second connecting member being slideably engaged with the first rail and
4 the second rail.

1 35. The housing assembly of claim 32, wherein a back surface of the first housing
2 segment includes a first rail and a second rail, the back surface opposing the front surface.

1 36. The housing assembly of claim 35, wherein the second housing segment includes a
2 bottom housing and a back plate, the bottom housing being shaped to abut a top housing of
3 the first housing segment when the second housing segment is moved into the contracted
4 position, the back plate being positioned to slide along a back surface of the first housing
5 segment when the second housing segment is moved between the contracted position and the
6 extended position.

1 37. The housing assembly of claim 36, wherein the back plate is dimensioned to slide
2 between the first rail and the second rail on the back surface of the first housing segment, and
3 wherein the back plate includes a first connecting member to engage the first rail, and a
4 second connecting member to engage the second rail.

1 38. The housing assembly of claim 27, wherein the first housing segment includes a top
2 shell, a midframe, and a bottom shell, a first rail formed on a first lateral side of the
3 midframe, a second rail formed on a second lateral side of the midframe, and wherein a back
4 surface of the first housing segment includes a third rail and a fourth rail.

1 39. The housing assembly of claim 38, wherein the second housing segment includes a
2 first bottom housing and a back plate, and wherein the first housing segment includes a top
3 housing and a reduced section, the bottom housing of the second housing segment being
4 moveable over the reduced section of the first housing segment to abut the top housing when
5 the second housing segment is positioned in the contracted position, wherein the back plate is
6 dimensioned to move within the third rail and the fourth rail of the first housing segment to
7 slide along the back surface of the first housing segment, and wherein an interior of the

8 bottom housing includes a first connecting member that is engaged with the first rail
9 provided on the midframe, and a second connecting member that is engaged with the second
10 rail provided on the midframe, the bottom housing .

1 40. The housing assembly of claim 37, wherein the first connecting member and the
2 second connecting member are each biased, wherein the first rail is configured to retain the
3 first connecting member in an unbiased state at a position corresponding to the contracted
4 position and at another position corresponding to the extended position, and wherein the
5 second rail is configured to retain the second connecting member in an unbiased state at a
6 position corresponding to the contracted position and at another position corresponding to the
7 extended position.

1 41. A handheld computer comprising:
2 a first segment providing a first input feature;
3 a second segment slideably coupled to the first segment to move between a contracted
4 position and an extended position, the second segment providing a second input
5 feature, wherein the second segment overlays a portion of the first segment when
6 moved towards the contracted position so as to reduce a length of the handheld
7 computer.

1 42. The handheld computer of claim 41, wherein the first input feature corresponds to a
2 contact-sensitive display.

1 43. The handheld computer of claim 41, wherein the second input feature corresponds to
2 one or more buttons.

1 44. The handheld computer of claim 41, wherein the first segment has a reduced section
2 that has a lesser thickness than a remainder of the first portion, and wherein the second
3 segment slides over the reduced section when moving towards the contracted position.

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